UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER
ROBERTS, BRIAN S

ART UNIT	PAPER NUMBER
2616	

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Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	09/868,398	HAGENAUER ET AL.
	Examiner	Art Unit	
	Brian Roberts	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 August 2006*.

2a)☒ This action is **FINAL.**   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *10-18* is/are pending in the application.

     4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *10-18* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

     a)☐ All   b)☐ Some * c)☐ None of:

       1.☐ Certified copies of the priority documents have been received.

       2.☐ Certified copies of the priority documents have been received in Application No. _____.

       3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

     * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
     Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
     Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

- Claims 1-9 have been previously cancelled.

- Claims 10 and 17 have been amended.

- Claims 10-18 remain pending.

Claim Rejections - 35 USC § 112

1.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly
> claiming the subject matter which the applicant regards as his invention.

2.   Claims 9-18 are rejected under 35 U.S.C. 112, second paragraph, as being

indefinite for failing to particularly point out and distinctly claim the subject matter which

applicant regards as the invention.

-      In reference to claims 9 and 17

Claims 9 and 17 recite the limitation "the source bit rates". There is insufficient

antecedent basis for this limitation in the claim. Furthermore, the claims 9 and 17

rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting

essential steps, such omission amounting to a gap between the steps. See MPEP

§ 2172.01. The omitted steps are: selecting and utilizing source bit rates and voice

coding rates. Furthermore, claim 9 and similarly for claim 17 state "channel-coding a

first portion of the data bits and the atleast one mode bit in the same way for all the

source bit rates, voice coding rates and code modes being used". This portion of the

claim is unclear because the channel-coding being used is a type of code mode.

- In reference to claims 10-16 and 18

Claims 10-16 and 18 are rejected as being dependent on independent claims 9

and 17, respectively.

Claim Rejections - 35 USC § 102

3.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by
another filed in the United States before the invention by the applicant for patent or (2) a patent
granted on an application for patent by another filed in the United States before the invention by the
applicant for patent, except that an international application filed under the treaty defined in section
351(a) shall have the effects for purposes of this subsection of an application filed in the United States
only if the international application designated the United States and was published under Article 21(2)
of such treaty in the English language.

4.   Claims 10-12 and 14-18, as best understood, are rejected under 35

U.S.C. 102(e) as being anticipated by Bruhn (US 6256487).

- In reference to claim 10

In Figure 3, Bruhn teaches a method of channel and source coding and decoding

data structured in frames that includes:

- Dynamically selecting a speech or source code mode from a number of

  possible code modes (column 2 lines 10-54; column 6 lines 10-42)

- Speech or source coding the data in accordance with the selected code mode

  (column 2 lines 10-54; column 6 lines 10-42)

- A mode indicator to inform the receiver of the selected coding technique

  (column 6 lines 43-64)

- • Channel encoding the mode indicator with a relatively week channel code independently of the selected source coding mode (column 7 lines 8-11)

- • Utilizing a combination of speech coding and channel coding to encode the payload data of a frame. (column 3 line 65 – column 4 line1) The payload is first source coded then channel coded utilizing a channel code that is independent of the selected source code. (column 6 lines 7-41) The source/channel encoded payload can be transmitted in conjunction with the weak channel encoded mode indicator to a receiver. (column 6 lines 46-50) Thus the channel-encoding data bits and source-coded data bits are contained within the same data frame to be transmitted.

- In reference to claim 11

Bruhn teaches selecting the source code mode based "upon the radio propagation characteristics of radio communication channels, and the loading of the system". (column 2 lines 48-54)

- In reference to claim 12

Bruhn teaches a method of "a mode request which informs a transmitter of a particular codec mode desired by a receiver for subsequently transmitted information blocks or frames and/or channel measurement information". (column 4 lines 1-6) (column 6 lines 42-63)

- In reference to claim 14

Bruhn teaches channel decoding the mode indicator with a relatively week

channel code. (column 7 lines 8-11)

- In reference to claim 15

Bruhn teaches channel encoding the mode indicator with a relatively week

channel code independently of the selected source coding mode (column 7 lines 8-11)

- In reference to claim 16

In Figure 4, Bruhn teaches a method where the mode indicator in the frame is

determined by the mode information likelihood processor (107) and delivered to the

channel decoder (109) to recover the information via the known redundant bits and the

known channel coding. (column 7 line 54-65) (column 10 lines 8-27)

- In reference to claim 17

In Figure 3, Bruhn teaches a system and method of channel and source coding

and decoding data structured in frames that includes:

- Dynamically selecting a speech or source code mode from a number of

  possible code modes (column 2 lines 10-54; column 6 lines 10-42)

- Speech or source coding the data in accordance with the selected code mode

  (column 2 lines 10-54; column 6 lines 10-42)

- A mode indicator to inform the receiver of the selected coding technique (column 6 lines 43-64)

- A mode control processor (48) for channel encoding the mode indicator with a relatively week channel code independently of the selected source coding mode (column 7 lines 8-11)

- Utilizing a combination of speech coding and channel coding to encode the payload data of a frame. (column 3 line 65 – column 4 line1) The payload is first source coded then channel coded utilizing a channel code that is independent of the selected source code. (column 6 lines 7-41) The source/channel encoded payload can be transmitted in conjunction with the weak channel encoded mode indicator to a receiver. (column 6 lines 46-50) Thus the channel-encoding data bits and source-coded data bits are contained within the same data frame to be transmitted.

- In reference to claim 18

In Figure 4, Bruhn teaches a system and method that includes a processor (107) where redundancy is added to the data frame so that the first portion of the channel-coded data bits act as overhead to allow the decoding of the mode indicator according to the selected coding mode. (column 3 lines 34-55) Bruhn further teaches channel decoding the mode indicator with a relatively week channel code. (column 7 lines 8-11)

Claim Rejections - 35 USC § 103

5.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

6.   Claim 13, as best understood, is rejected under 35 U.S.C. 103(a) as being

unpatentable over Bruhn (US 6256487).

-      In reference to claim 13

In Figure 3, Bruhn teaches a method of utilizing a convolution code for channel

coding the source coded payload data (column 6 lines 10-27) and channel encoding the

mode indicator with a relatively week channel code. (column 7 lines 8-11) Bruhn further

teaches that the value of the bits in the mode indicator depends on the convolution and

speech coding employed for the data payload.

Bruhn does not explicitly teach utilizing a convolution code for the step of channel

coding the mode indicator.

Bruhn teaches utilizing a convolution code to channel code data. (column 6 lines

10-27)

It would have been obvious to a person of ordinary skill in the art at the time of

the invention to modify method of utilizing a channel code to channel code the mode

indicator of Bruhn to include utilizing a convolution code to channel code the mode

indication because utilizing convolution coding with a low code rate provides for greater

error protection. (column 2 lines 36-44)

Response to Arguments

7.   Applicant's arguments with respect to claims 10 and 17 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

8.   Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

9.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian Roberts whose telephone number is (571) 272-3095. The examiner can normally be reached on M-F 10:00-7:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Hassan Kizou can be reached on (571) 272-3088. The fax phone number

for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

BSR
10/18/2006

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